

## ABSTRACT OF THE DISCLOSURE

An operational amplifier capable of offset cancel in a shorter period, as well as a line driver capable of shortening one horizontal period and a liquid crystal display device are provided. In the operational amplifier of the invention, a time necessary for feed back control can be shortened than usual by a constitution that an output voltage  $V_0$  in one horizontal period  $H_1$  which is one horizontal period before is defined as a reference voltage in an offset cancel preparatory period  $HC_2$ , thereby changing the output voltage  $V_0(2)$  only by the offset voltage  $V_0(2)$  by the feed back control. In the line driver of the invention, the operational amplifier not used for the output of display data  $D_1$  to  $D_6$  conducts offset cancel operation and it is successively shifted on every one horizontal period. Since it is no more necessary to incorporate the offset cancel preparatory period in the output period, one horizontal period can be shortened further.